

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - Pleasanton, TEXAS

SEEDING REPORT - May 3, 2019

SYNOPTIC/MESOSCALE CONDITIONS:

Upper air analysis shows a longwave troughing across much of the country, a shortwave over south Texas and a shortwave trough across Mexico. At the surface, low pressure is located across the mountains of Mexico with a trough axis extending into New Mexico, a stationary front positioned across north-central Texas and high pressure centered east Texas and southeast Louisiana. The flow at upper levels is mainly westerly with it east northeasterly at the surface. The current dew point temperature is in the mid 60's to low 70's and environmental temperature in the upper 60's to mid 70's with broken clouds to overcast skies and showers and thunderstorms in the vicinity. For today, expect another active weather pattern with an existing shortwave moving out of our area and another shortwave trough moving in from Mexico. This trough will traverse Texas during the day through the overnight hours bringing showers and thunderstorms to much of the target zone. Surface base CAPE will be between 2000 and 2500 J/kg with and eroded cap for a little while this afternoon to allow for some good convection before capping from the west to the east by early this evening. I'm not expecting much in the way of severe thunderstorms but there could be one or two embedded strong to severe storms with initial cells. The Storm Prediction Center (SPC) puts us under a slight chance for severe thunderstorms. Any strong to severe strong will be in the form of large hail and damaging gusty winds due to a fairly steep mid-level lapse rate and bulk shear 30-40kts. Active weather continues into the evening hours mainly before 07 UTC Saturday. Expect anywhere between .60 to 2.50in of rainfall with higher amounts under strong thunderstorms. Storms should be to our east by around sunrise on Saturday as the axis of the trough will have already passed over our area. Quiet conditions are in the forecast beginning Saturday afternoon through Sunday as shortwave ridge builds in suppressing any storm developments. This ridge breaks down overnight Sunday ahead of the next system pushing eastward. A shortwave trough begins to move in from the southwest late Sunday into Monday bringing another round of showers and thunderstorms to south-central Texas. Monday looks to be the best day for showers and thunderstorms. The forecast calls for the high to be close to the normal with the low in the mid 60's to low 70's through the end of the period.

LIFTING MECHANISM:

Short-wave trough, Cool Air Aloft, Stationary Front

THERMODYNAMIC INDICES (12Z KCRP)

Freezing Level (m)	4274	CAPE (J/Kg)	1889.28
Precipitable Water (inches)	1.77	CINH (J/Kg)	2.20
LCL	581.34	LI (°C)	-8.15
CCL	717.87	PB	-8.15
CRP ICA	-26.42	Cloud Base Temp (°C)	23.7
Cloud Base (meters)	914.4		
Warm Cloud Depth (meters)	3359.6		

DISCUSSION: A well defined shortwave trough moved across Texas today that brought substantial showers and thunderstorms to our area. Cells first developed across central Texas that proceeded eastwards during the early afternoon hours with weak isolated towering cumulus that brought isolated

short-lived showers to south-central Texas earlier in the day but with good enough instability with daytime heating cells developed over counties west northwest of the Uvalde and Bandera Counties before reaching the target zone. Late in the afternoon the cell multiplied becoming a Mesoscale Convective System (MCS) while traveling east southeastward. 57AA was launched as B-type clouds began to move into the area. We were able to target a couple cells across the western or northwestern counties of the target zone but unfortunately, I was unable to capture flight tracks or communicate with a new trainee pilot that was launched. Cells were seeded but not with the full dosages of seeding materials at the pilot's discretion. Even though the computer system on my ended acted up, I will consider it was a successful day of seed despite the time of the day the seedable clouds developed and moved in.

WATCHES/WARNINGS:

Severe Thunderstorms, Hail, Tornado

SEEDED CELL ID'S:

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FLIGHT INFORMATION:

TIME (Z)	Plane	Flare Location	County
21:35	57AA	In Air	
-	57AA	2879N 9963W	-
-	57AA	2896N 9963W	-
-	57AA	2897N 9962W	-
-	57AA	2899N 9962W	-
-	57AA	2909N 9969W	-
-	57AA	2909N 9966W	-
00:45	57AA	Landed	

Seeding operations were conducted with (7+0H) flares. This is the 1st day for seeding in May and the 1st day for seeding during the season.